



# Statewide Information Technology 2010-2012 Strategic Plan



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## A Message from Delaware's CIO



As the State's Chief Information Officer, I am a part of the evaluation and oversight of many large and small information technology (IT) investments within the State of Delaware. One of the many important roles of the Department of Technology and Information (DTI) is setting the strategic IT vision for the State. Thus, I am excited to share with you our strategies and action plans that are detailed in this third edition of the State of Delaware's IT Strategic Plan.

The focus of the IT Strategic Plan for the State of Delaware is to improve the efficiency of government through the use of IT. It is our goal to align the DTI strategic plan with Governor Markell's policy agenda: smaller, more efficient government, improving education, and increasing employee productivity.

The State of Delaware is a large organization with an annual budget of over \$3.0B and nearly 15,000 State employees in the executive branch. DTI is responsible for delivering a full range of information and communication technology services to the sixteen (16) departments within the Executive, Judiciary, and Legislative branches and K-12 School Districts, totaling approximately 33,000 employees.

Information technology is a critical component to operating the State of Delaware; without IT, delivering services to the citizens of this great state would be impossible. Historically, IT services and procurement have been provided on a department by department basis, resulting in disparity of systems, duplication of functionality, and significant costs.

The vision is to transform the state from a siloed department model to a more collaborative or enterprise model. Over the next several years, we want to create a roadmap that produces a consolidated enterprise. This consolidated enterprise will optimize IT spending, decisions, projects, and overall technology that will improve service delivery and allow for the rapid development of innovative solutions.

If you are a leader in a State organization, a customer, a vendor, or a partner, this plan will provide you with insight into our business goals and the approaches that the State is taking with technology to address those goals. All of our partners are expected to propose solutions and ideas that support our business goals and the associated technology.

In closing, I would like to emphasize the importance of these strategies and action plans that are critical to enabling efficiencies within government. We want to position the state of Delaware for the future; DTI's Senior Management Team and Customer Relationship Specialists will be available to facilitate your understanding of the plan. Strategic planning is a cyclical process and I am convinced that it will lead to advancing our bold agenda to make IT more efficient and effective for the state employees and citizens.



Secretary James H. Sills, III

## A Message from Delaware's Governor



Technology provides an important role in delivering the services and information that the citizens of Delaware use each day. While we face current economic and budgetary challenges, we have unique opportunities to shape our future. Technology will serve as a critical asset as we move Delaware forward to create more and better private sector jobs, stronger public schools, and a more responsive and cost effective government.

In the following pages, you will find the state's 2010-2012 Statewide Information Technology Strategic Plan, which is rooted in our shared values of integrity, adaptability, teamwork, efficiency, and the goal of excellence. The plan builds upon our previous initiatives and focuses on the goals and strategies for the future of information technology in Delaware. This document outlines how we plan to move forward to better leverage our IT operations by creating a streamlined IT enterprise which could save millions of taxpayer dollars over the next few years.

I look forward to putting our IT Strategic Plan to work for Delaware. I applaud our many information technology professionals for their valuable contributions to these goals and our Strategic Plan. They have my support and thanks for their efforts to advance technology in and improve the quality of life of our great State of Delaware.

Governor Jack Markell



## Executive Summary

The State of Delaware (State) makes investments in its future every day; from laws, to court decisions, to environmental regulations, each decision shapes our future landscape. Today, changes in nearly every aspect of daily life are coming at an unprecedented pace. How will the State respond? The State must face the challenge of balancing the needs of today while anticipating the needs of tomorrow. Developing a planned response to this challenge and analyzing ways to take advantage of the opportunities presented along the way are key strategies to managing the State's investments for the future.

The role of IT in this planned response continues to evolve. One does not have to look very far to see the impact of IT on personal and professional life. From the Internet, to computers, to cell phones, to navigational systems, IT has changed the way we obtain, share, and process information.

A focused effort will position IT to efficiently and adequately support the new directions being mandated by our citizens, our customers, our suppliers, and the global economy. This plan will show the relationships between the State's business goals and the IT services that support them.

The State's Strategic IT Plan identifies several of Delaware's major goals, and it establishes the IT directions that the State will adopt in order to meet those goals over the next three years. DTI will review the plan every year to reassess the State's goals and take into consideration current trends in business, government, and technology.

## About the Department of Technology and Information (DTI)

DTI is the state's central IT organization, chartered to (1) deliver core services to other state organizations and (2) exercise governance over the technology direction and investments of the state. DTI is primarily an internal service organization, with only a few of its services directly touching the citizens or customers of the state. Primarily, DTI provides enterprise services that enable other organizations to effectively fulfill their missions.

DTI's "customers" are all state organizations including the Legislative, Executive, and Judicial branches, public schools, and the various agencies and quasi-agencies that serve the citizens of Delaware. DTI is committed to delivering high quality and cost-effective services that meet or exceed the customer's requirements. Balancing these objectives requires a strong bond between DTI and the customer, as well as a mutual commitment to success.

Encompassed in DTI's operational domain is the State's infrastructure including data centers, servers, mainframe operations, storage, operating systems, voice and data networks, and hundreds of software applications. DTI is also responsible for protecting the State's IT assets from threats, remediation of vulnerabilities, and protecting citizen data. Additionally, DTI is actively involved in many enterprise applications, GIS, data management, and governance.

What is DTI working to achieve?

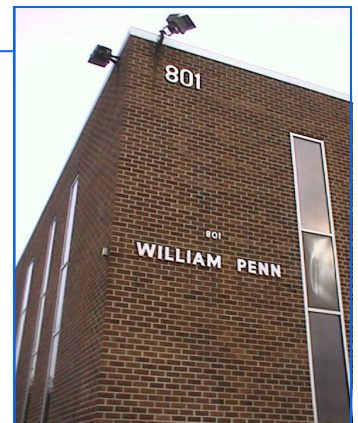
- Excellence in State government.

Why does DTI exist?

- To provide leadership in the selection, development, and deployment of technology solutions in the State of Delaware.

What does DTI want to accomplish?

- Continuously improve the delivery of excellent services to our customers.
- Promote and facilitate the sharing of IT resources and practices in order to maximize collaboration and minimize the duplication of costs and efforts.
- Ensure the physical and cyber security of people, facilities, and information.



## Strategic Objectives

### Government Efficiency

#### Information Technology (IT) Consolidation

Due to the proliferation of complex IT infrastructure into State organizations and the department-based versus enterprise-based deployment of IT personnel, the State will obtain efficiencies and cost savings by implementing the following initiatives:



- **Enterprise shared services** – This will enable the State to leverage technology resources and business processes across multiple organizations by consolidating services and support into one managed environment.
- **Centralized licensing** – By centralizing the licensing of technology across the State, the State can leverage the combined purchasing power of many organizations to ensure that competitive and cost effective licensing terms are obtained.
- **Hardware consolidation** (virtualization, life cycle management) – Through the use of virtualization techniques, the State can significantly reduce the amount of technology hardware that is required to meet our business needs. The virtualization technique will enable the State to minimize service disruptions due to hardware failures and preventative maintenance.
- **Centralized funding** – The State's ability to actively manage the disbursement of funds for IT investments will ensure that cost savings opportunities are appropriately vetted and IT resources are used efficiently.

#### Enterprise Resource Planning (ERP) Implementation

The implementation of ERP was a significant event for the State; it required all State organizations to collaborate on the core human resource practices needed to run the entire State. This initiative established a precedent and a culture of shared purpose across the State, which will benefit the State for many years and in areas beyond human resources.



- **Upgrade existing versions** – For several years, the State has enjoyed the efficiencies of the human resource capabilities that were delivered by ERP. In order to sustain those efficiencies and introduce new capabilities, updates to technology and some business processes are required.
- **Reduce number of instances from three to one** – At this time, three State organizations have implemented ERP solutions from the same vendor. Efficiencies will be obtained by reducing the three separate instances into one instance, while preserving the business capabilities of the three State organizations.
- **Enterprise adoption of Time and Labor** – All State organizations need to track the sick and vacation time of their employees. Many State organizations need to track the activities and projects that their employees are actively completing. With the enterprise adoption of the time and labor capabilities within ERP, the State will consolidate the technology and standardize the suitable business processes.
- **Common reporting strategy** – A tremendous amount of data is managed with the ERP solution, and a consistent approach to sharing (reporting) and analyzing the data is required. This initiative will determine and implement a common reporting strategy within the State's ERP solution.



**Financials implementation** – The implementation of the financials module within ERP will be a major milestone for the State; it will standardize key financial processes and practices across the various State organizations, and it will deploy consistent supporting technology.

## E-government Architecture/Infrastructure

The value of a State government presence on the Internet is well understood at this time. However, it is still challenging to determine the types of information, services, and interactions that are prudent to share via the Internet.

- **Self service** (enhance egovernment options) – When a consumer can obtain State information or services without any State personnel interaction or with minimal interaction, it benefits both parties. The State will continue to sustain and enhance the number of self-service opportunities that it offers.
- **Social networking** – A popular and effective way for people to communicate and share information is on social networking sites. The State is utilizing those forums to share State information in a comfortable and friendly, yet secure environment, which is analogous to public outreach campaigns that use community events such as fairs and festivals.
- **Shared data** – Due to the proliferation of easy-to-use tools, the requests for direct access to State data is increasing. The State plans to address this trend by placing more public State data directly on the Internet, which leads to efficiencies and cost avoidance. For instance, the State no longer needs to develop, deploy, and support the tools for viewing and analyzing certain public datasets.

## Enterprise Collaboration

The ability to provide and consume information from a variety of forums, in a vast array of formats, is critical to solving today's problems. The State must have tools that provide them with the capability to collaborate at any time or location.

- **Shared service for SharePoint** – Possessing the ability to locate the latest version of a key document is critical to effective problem solving and customer service. The establishment of a framework of tools that enables employees to creatively apply the appropriate tool to the task is essential to the process of cultivating trust and collaboration within the enterprise.
- **Video and web-based conferencing** – While the ability to convey textual information is important for most people, many situations require the visualization of information and resources in order to effectively communicate. Today's tools continue to increase the availability and functionality of video conferencing solutions, and the State must keep pace with these upgrades in several key business areas.
- **Unified communication** – The marketplace has provided a plethora of devices that manage specific types of communication, which has created its own problems. The State will deploy solutions that facilitate the delivery of multiple types of communication to a variety of devices.

## Project Portfolio Management

Managing a collection of projects holistically is a powerful approach for driving efficiencies within an organization. It ensures that the proper prioritization and analysis takes place within an enterprise as a part of the decision-making process. The State will apply this technique to its project portfolio and begin the vetting process for other areas, such as application portfolios.



## Business Process Improvement

While technology is extremely effective at automating processes and shortening the time that it takes to satisfy a customer's request, the State must continue to utilize techniques that will improve its business processes from a citizen's perspective.

- **Licensing and Permitting** – Too often customers have been forced to interact with several State organizations, through a disjointed process, before acquiring the mandated license or permit. The State will create collaborative forums to improve its business processes, especially those processes that cross multiple organizations and require enhanced data sharing.
- **Centers of Excellence** – This is an environment that is staffed, supported by, and driven by the State to fill a temporary gap in the service delivery model provided by State organizations. These environments are dependent on technology to manage collaboration, analyze business processes, and drive positive change across multiple organizations.

## Information Technology Governance

### Governance Structure (TIC, iTIC, ARB, TASC)

An effective governance structure must ensure that services are delivered efficiently, and it must facilitate good decision making. Managing the capabilities of technologies that are common across the State is critical to providing cost effective technology to the State of Delaware.

- **Technology Investment Council (TIC)** – In accordance with the Delaware code, this council is charged to enforce active project management on IT projects and require the use of best practices. The council will identify opportunities to leverage expertise in strategically important areas of IT by partnering with private sector entities. During the next several years, the State will streamline the processes associated with these activities.
- **Internal Technology Investment Council (iTIC)** – This council was established by the State's Chief Information Officer to provide a forum for cross-team assessments of proposed technology related business cases. Business cases are reviewed with specific consideration given to the proposed project's feasibility, risk, and suitability, as well as its overall compliance with standards and guidelines. DTI will upgrade the technology that supports the council in order to improve the overall efficiency of the assessments.
- **Architecture Review Board (ARB)** – The ARB is a team of experienced IT professionals who evaluate the technological merits of proposed solutions. By evaluating technology solutions prior to the investment of resources, the State can ensure data is being shared, shared services are being utilized, and existing solutions are being leveraged.
- **Technology and Architecture Standards Committee (TASC)** – This committee was established to standardize the State's use of technology in order to drive down costs and leverage our knowledge of products across multiple organizations. The committee will identify potential gaps in the State's portfolio of standards and policies.

## Improving Education Technology

### Transparent LAN Services (TLS) Upgrades

By partnering with Verizon, the Department of Technology and Information deployed one of the most comprehensive and robust broadband deployments in the nation. TLS has been deployed in more than 200 public schools, and it provides teachers and students with high-speed access to instructional materials world-wide.

- **Delaware Comprehensive Assessment System (DCAS) requirements** – Due to the planned requirements for this solution, which will utilize the latest web based technologies, equal access to high-speed services and quality tools are critical to the success of this initial assessment solution. Enterprise packet-shaping technology will be implemented to enable the prioritization of data traffic associated with Online Student Assessments.



- Distance learning – The State’s deployment of broadband to the majority of our schools enables new and exciting opportunities to eliminate some of the geographic barriers in the learning process. Live teleconferencing learning opportunities with other classrooms worldwide, is another tool and option for our educators and students.



## Network Infrastructure Upgrades Improving Reliability and Security

The Department of Technology and Information has a long, rich history of consistently improving the reliability and security of the network services that it provides to the State. In the upcoming months, DTI plans to complete a series of initiatives that will benefit the educational community.

- Security enhancements – During the past several years, DTI implemented an approach to network security by utilizing Virtual Routing and Forwarding (VRF) technology that has significantly improved the reliability and security of our network infrastructure within all three branches of government. The State is exploring options for deploying this approach within the K12 community.
- Reliability improvements – Additional network infrastructure will be constructed in a State Data Center for both redundancy and load balancing.
- Providing new services – The State will implement an enterprise video bridge and video gateway to facilitate video communications. This will enable the educational community to expand communications and distance learning opportunities using Internet 2. Additionally, the State is planning to establish and implement standard video technology for deaf communications, which will facilitate communication between State and school libraries and the Sterck School for the deaf.

## Information Security and Reliability

### Data Loss Prevention

The loss of protected information has become a regular headline event. While much attention is focused on securing our electronic assets from outside threats such as overseas hackers, an equally dangerous situation is the problem of data loss from the inside. The ability of the State to identify, monitor, and protect data is critical to maintaining the trust that the citizens of the State and various business partners have placed in us. The State will continue a series of activities that are intended to detect and prevent the inappropriate use and transmission of confidential information.



## Disaster Recovery and Continuity of Operation Planning (COOP)

The provisioning of critical services to its citizens is the primary responsibility of state government. The ability to provide those services can be irrevocably interrupted by disasters brought on by the forces of nature or by the actions of human beings, either by accident or design. Therefore, the ability to plan for, practice for, and execute the steps required to mitigate or recover from a disaster is a critical responsibility for state government. DTI’s Disaster Recovery and COOP Program is aimed directly at meeting that responsibility as it relates to supporting critical state government services. The development of a statewide COOP Plan will provide a standardized structure for State of Delaware government services to be recovered in a prioritized, systematic order. It will also ensure that the physical and cyber security of people, facilities, and information for the State of Delaware are protected and can be recovered in the event of a disaster. This will enable leadership to mitigate existing risks and make recovery decisions, in a consistent manner, by analyzing uniform data across the state.



## Information Technology Workforce Development

### Maintaining A Highly Skilled Technology Workforce

With an increasing focus on shared services, self-service options for citizens, and shared data, state organizations will depend on their IT workforce to be efficient and effective. Thus, the State must provide educational and professional growth opportunities for employees to utilize, which will help to ensure minimal turnover rates and maximum tenure of its IT professionals.

- Educational opportunities – The State will provide education and certification opportunities for relevant technical personnel, security management, project management, and organizational change management. When possible, the training and education courses will be offered on-line to minimize the constraints of time and location.
- Succession planning – The State will develop a strategy, with specific recommendations, to address succession planning for the critical IT roles. These plans will help to mitigate any risks associated with the transitioning of new IT professionals into a critical IT role.

